

WHAT IS CLAIMED IS:

1. A method for identifying a compound that modulates untranslated region-dependent expression of a vascular endothelial growth factor (VEGF) gene, said method comprising:
 - (a) contacting a member of a library of compounds with a cell containing a nucleic acid comprising a reporter gene operably linked to an UTR of the VEGF gene; and
 - (b) detecting a reporter protein translated from said reporter gene, wherein a compound that modulates untranslated region-dependent expression of a VEGF gene is identified if the expression of said reporter gene in the presence of a compound is altered as compared to the expression of said reporter gene in the absence of said compound or the presence of a control.
2. A method for identifying a compound that modulates untranslated region-dependent expression of a VEGF gene, said method comprising:
 - (a) contacting a member of a library of compounds with a cell-free translation mixture and a nucleic acid comprising a reporter gene operably linked to an UTR of the VEGF gene; and
 - (b) detecting the expression of said reporter gene, wherein a compound that modulates untranslated region-dependent expression of a VEGF gene is identified if the expression of said reporter gene in the presence of a compound is altered as compared to the expression of said reporter gene in the absence of said compound or the presence of a control.
3. The method of claim 1 or 2, wherein the UTR of the VEGF gene is the 5' untranslated region (5' UTR) of a VEGF gene.
4. The method of claim 3 wherein the 5' UTR of the VEGF gene is operably linked upstream of the reporter gene.
5. The method of claim 1 or 2, wherein the UTR of VEGF gene is the 3' untranslated region (3' UTR) of a VEGF gene.

6. The method of claim 5, wherein the 3' UTR of the VEGF gene is operably linked downstream of the reporter gene.
7. The method of claim 3, wherein the nucleic acid further comprises the 3' UTR of a VEGF gene.
8. The method of claim 7, wherein the 3' UTR of the VEGF gene is operably linked downstream of the reporter gene.
9. The method of claim 1 or 2, wherein the reporter gene further comprises an intron.
10. The method of claim 1 or 2, wherein the UTR of the VEGF gene comprises an iron response element ("IRE"), internal ribosome entry site ("IRES"), upstream open reading frame ("uORF"), or AU-rich element ("ARE").
11. The method of claim 1 or 2, wherein the nucleic acid is further polyadenylated at the 3' end.
12. The method of claim 1 or 2, wherein the nucleic acid is not capped at the 5' end.
13. The method of claim 1 or 2, wherein the reporter gene encodes firefly luciferase, renilla luciferase, click beetle luciferase, green fluorescent protein, yellow fluorescent protein, red fluorescent protein, cyan fluorescent protein, blue fluorescent protein, beta-galactosidase, beta-glucoronidase, beta-lactamase, chloramphenicol acetyltransferase, or alkaline phosphatase.
14. The method of claim 1, wherein said cell is stably transfected with said nucleic acid.
15. The method of claim 1, wherein said cell is transiently transfected with said nucleic acid.
16. The method of claim 1, wherein said cell is transfected with an episomal expression vector comprising said nucleic acid.

17. The method of claim 1 or 2 further comprising measuring the effect of said compound on the expression of the VEGF gene.
18. The method of claim 1, wherein the cell is a human cell, a yeast cell, a mouse cell, a rat cell, a Chinese hamster ovary ("CHO") cell, a MCF-7 cell, a primary cell, or an undifferentiated cancer cell.
19. The method of claim 18 wherein the human cell is a HeLa cell or a 293 cell.
20. The method of claim 3, wherein the cell-free translation mixture is a cell extract.
21. The method of claim 20, wherein the cell extract is derived from is a human cell, a yeast cell, a mouse cell, a rat cell, a Chinese hamster ovary ("CHO") cell, a *Xenopus* oocyte, a MCF-7 cell, a primary cell, an undifferentiated cancer cell, a reticulocyte, or a rye embryo.
22. The method of claim 1 or 2, wherein the compound is selected from a combinatorial library of compounds comprising peptoids, random biooligomers, diversomers, vinylogous polypeptides, nonpeptidal peptidomimetics, oligocarbamates, peptidyl phosphonates, peptide nucleic acid libraries, antibody libraries, carbohydrate libraries, and small organic molecule libraries.
23. The method of claim 22, wherein the small organic molecule libraries are libraries of benzodiazepines, isoprenoids, thiazolidinones, metathiazanones, pyrrolidines, morpholino compounds, or diazepindiones.
24. The method of claim 1, wherein the step of contacting a library of compounds with a cell is in an aqueous solution comprising a buffer and a combination of salts.
25. The method of claim 24, wherein the aqueous solution approximates or mimics physiologic conditions.
26. The method of claim 24, wherein the aqueous solution further comprises a detergent or a surfactant.

27. The method of claim 1 or 2 further comprising (c) determining the structure of the compound that modulates untranslated region-dependent expression of the VEGF gene.
28. The method of claim 27, wherein the structure of the compound is determined by mass spectroscopy, NMR, vibrational spectroscopy, or X-ray crystallography.
29. The method of claim 1 or 2, wherein the compound directly binds to an RNA transcribed from the VEGF gene.
30. The method of claim 1 or 2, wherein the compound binds to one or more proteins that modulate untranslated region-dependent expression of the VEGF gene.
31. The method of claim 7, wherein the compound disrupts an interaction between the 5' UTR and the 3' UTR of the VEGF gene.
32. A method of modulating the expression of a VEGF gene comprising contacting a cell expressing the VEGF gene with a compound, or a pharmaceutically acceptable salt thereof, identified according the method of claim 1 or 2.
33. A method of treating, preventing or ameliorating cancer or one or more symptoms thereof, said method comprising administering to a subject in need thereof an effective amount of a compound, or a pharmaceutically acceptable salt thereof, identified according to the method of claim 1 or 2, wherein said effective amount decreases the expression of the VEGF gene.
34. A method of inhibiting or reducing angiogenesis, said method comprising administering to a subject in need thereof a prophylactically or therapeutically effective amount of a compound, or a pharmaceutically acceptable salt thereof, identified according to the method of claim 1 or 2, wherein said effective amount decreases the expression of the VEGF gene.
35. A method of identifying a compound that inhibits or reduces angiogenesis, said method comprising:

- (a) contacting a member of a library of compounds with a cell containing a nucleic acid comprising a reporter gene operably linked to an UTR of a VEGF gene; and
- (b) detecting the expression of said reporter gene, wherein if a compound that reduces the expression of said reporter gene relative to the expression of said reporter gene in the absence of said compound or the presence of a control is detected in (b), then
- (c) contacting the compound with a tumor cell and detecting the proliferation of said tumor cell, so that if the compound reduces or inhibits the proliferation of the tumor cell, the compound is identified as a compound that inhibits or reduces angiogenesis.

36. The method of claim 38 further comprising (d) testing said compound in an animal model for angiogenesis, wherein said testing comprises administering said compound to said animal model and verifying that angiogenesis is inhibited by said compound in said animal model.

37. A method of treating, preventing or ameliorating cancer or one or more symptoms thereof, said method comprising administering to a subject in need thereof an effective amount of a compound, or a pharmaceutically acceptable salt thereof, identified according to the method of claim 35.

38. A method of inhibiting or reducing angiogenesis, said method comprising administering to a subject in need thereof an effective amount of a compound, or a pharmaceutically acceptable salt thereof, identified according to the method of claim 35.

39. A method of identifying a compound that inhibits or reduces angiogenesis, said method comprising:

- (a) contacting a member of a library of compounds with a cell-free translation mixture and a nucleic acid comprising a reporter gene operably linked to an UTR of a VEGF gene; and
- (b) detecting the expression of said reporter gene, wherein if a compound that reduces the expression of said reporter gene relative to the expression of said reporter gene in the absence of said compound or the presence of a control is detected in (b), then

- (c) contacting the compound with a tumor cell and detecting the proliferation of said tumor cell, so that if the compound reduces or inhibits the proliferation of the tumor cell, the compound is identified as a compound that inhibits or reduces angiogenesis.

40. The method of claim 39 further comprising (d) testing said compound in an animal model for angiogenesis, wherein said testing comprises administering said compound to said animal model and verifying that angiogenesis is inhibited by said compound in said animal model.

41. A method of inhibiting or reducing angiogenesis, said method comprising administering to a subject in need thereof an effective amount of a compound, or a pharmaceutically acceptable salt thereof, identified according to the method of claim 39.

42. A method of treating, preventing or ameliorating cancer or one or more symptoms thereof, said method comprising administering to a subject in need thereof an effective amount of a compound, or a pharmaceutically acceptable salt thereof, identified according to the method of claim 39.

43. The method of claim 1 or 2 further comprising determining the specificity of the compound for the VEGF untranslated region.